

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000579**Date Inspected:** 04-Oct-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Ye Yongjun & Xu Bing**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Mock Up**Summary of Items Observed:**

Elevation 77:

The Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe welding and associated operations being performed for the fabrication of the Mock Up at elevation 77. The QA Inspector observed ZPMC welding personnel performing heat straightening operations on Skin Plate E Sub-Assembly (SA) MUSA-MA1.

The QA Inspector randomly observed a ZPMC helper, utilizing a grinder to remove excess material from Skin Plate A SA MUSA-MA2, after the removal of run off tabs by torch cutting.

Elevation 89:

The QA Inspector observed a ZPMC beveler utilizing a tracked semi-automatic torch beveling apparatus, to cut the bevels in piece mark MUB-MA24, of Skin Plate B. The attached photograph provides additional detail.

Elevation 114:

The QA Inspector randomly observed welding being performed for the fabrication of the Mock Up at elevation 114. The QA Inspector randomly observed ZPMC qualified welders Zhang Xianggrong and Guo Dengyun utilizing the Shielded Metal Arc Welding (SMAW) process to place attach lifting lugs to Interior Splice Assembly MUC-A65. Mr. Zhang and Mr. Guo were utilizing ZPMC approved Weld Procedure Specification (WPS)

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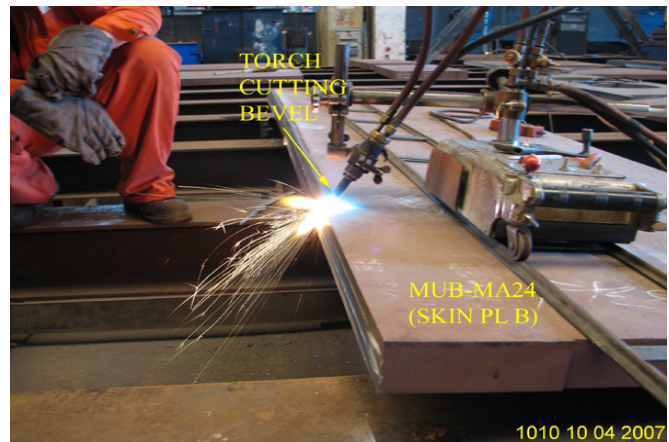
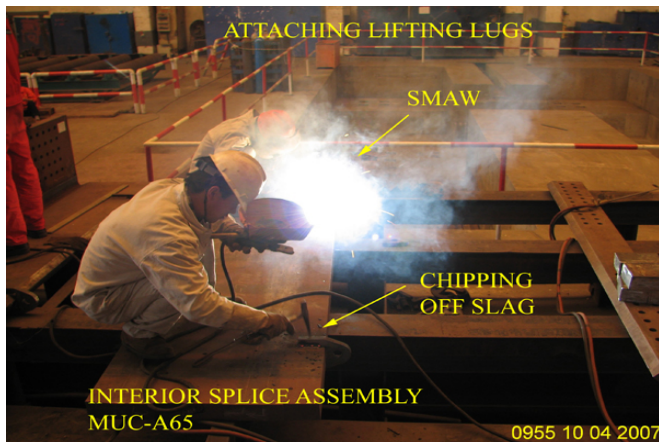
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WPS-B-P-2112. The QA Inspector observed ZPMC CWI Xu Bing monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 167 amps with a welding voltage of 23.5 volts for Mr. Zhang and 160 amps and 24 volts for Mr. Guo. Weld parameters appeared to comply with the above approved ZPMC WPS. The attached photograph provides additional detail.

The QA Inspector observed ZPMC welding personnel fitting up longitudinal stiffeners piece marks p920-1 and p920-2 to Interior Splice Assembly MUC-A65.

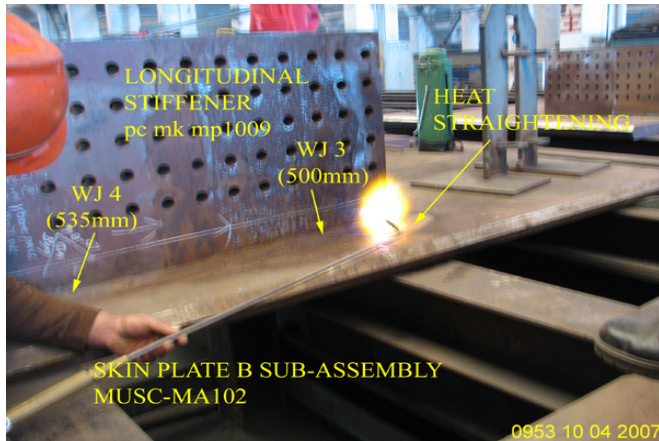
The QA Inspector randomly observed ZPMC qualified welders Lei Lichao and Bai Wenming utilizing the Flux Cored Arc Welding (FCAW) process to place the root pass in Weld Joint (WJ) number 3 attaching longitudinal stiffener piece mark p920-3 to Interior Splice Assembly MUC-A75. Mr. Lei welded half of the root pass in WJ number 3 while Mr Bai welded the other half. Mr. Lei and Mr. Bai were utilizing ZPMC approved WPS WPS-B-P-2232-TC-U5-F. The QA Inspector observed ZPMC CWI Xu Bing monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and documented them as follows: welding amperage 287 amps, welding voltage of 31.2 volts with a travel speed of 302 millimeters for Mr. Lei and 296 amps, 30.4 volts with a travel speed of 296 millimeters per minute for Mr. Bai. Weld parameters appeared to comply with the above approved ZPMC WPS.

The QA Inspector randomly observed ZPMC welding personnel performing heat straightening operations on longitudinal stiffeners piece marks mp1006 and mp1009 of Skin Plate B Lower, SA MUSC-MA102. The attached photograph provides additional detail.



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Summary of Conversations:

The QA Inspector asked ZPMC QA Representative Li Sui Yang and ZPMC CWI Xu Bing, why welding was being performed on Interior Splice Assembly MUC-A75, after ABF had informed Caltrans that all new welding was to be suspended until further notice. The only response that the QA Inspector received, was that the tack welds had been previously placed. The QA Inspector could not locate any tags or written notation on the part of fit up inspection or tack weld inspection, and asked Mr. Li where any such notation would be, and Mr. Li informed the QA Inspector that he could not locate any on the part.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By: Franco,Charlie

Quality Assurance Inspector

Reviewed By: Cochran,Jim

QA Reviewer